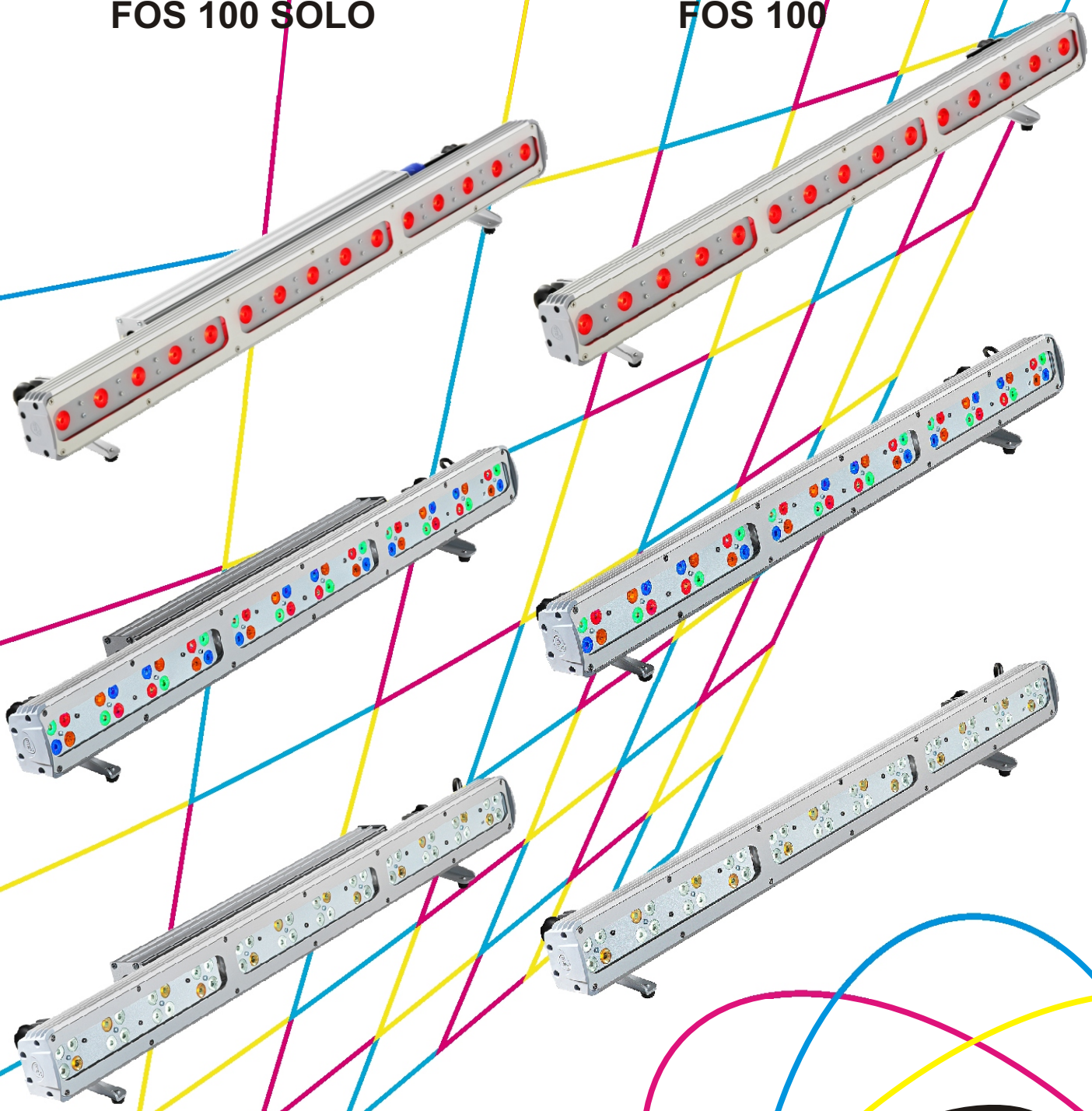
FOS 100 SOLO / FOS 100

FOS 100 SOLO

FOS 100



User's Manual Rel 4.0 **GB**

D.T.S. Illuminazione srl - ITALY
http://www.dts-lighting.it

DTS
The Lighting Company

Made in Italy

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DESCRIPTION

FOS 100 is a new compact self-contained LED bar designed for colouring large surfaces with a uniform projection, either indoor and outdoor.
FOS 100 can be used for many applications, such as: professional, for an ample range of special events; theatre and television, for uniform background colours and cycloramas; architectural, for lighting building facades, public and commercial spaces, monuments, etc.
FOS 100 is made on aluminium and steel offering high resistance to mechanical stress, with an IP65 protection rating.
FOS 100 length is 99 cm.
Various FOS 100 units can be easily connected together: the LEDs distribution pattern guarantees no black spaces between the LEDs of in-line bars, and an even coverage of lighted surfaces.
FOS 100 is available with or without a Z10 integrated power supply.
The Z10 power supply is available either with IP65 or IP20 protection rating.
Three dedicated lenses sets (Spot, Medium flood, Wide flood) are available for each model, offering different light beam projection angles.
FOS 100 SOLO can be controlled via any DMX lighting console.
FOS 100 range comprises various models, which employ different sets of LEDs tailored for distinct applications:
FOS 100+ FULL COLOUR (Full colour LEDs);
FOS 100 RGBA (Red + Green + Blue + Amber LEDs);
FOS 100 WHITE (White + Amber LEDs).

FOS 100+ FULL COLOUR and FOS 100+ SOLO FULL COLOUR
15 x 3W Full Colour LEDs • Integrated power supply (FOS 100+ SOLO FULL COLOUR)
FOS 100 RGBA and FOS 100 SOLO RGBA
48 x 1W RGB+Amber LEDs (12+12+12+12) • Integrated power supply (FOS 100 SOLO RGBA)
FOS 100 WHITE and FOS 100 SOLO WHITE
48 x 1W White+Amber LEDs (36+12) • Integrated power supply (FOS 100 SOLO WHITE)
FOS 100 TRIPLE SOLO
3 x FOS 100 + 3 x Z10 + 1 x TRIPLE BRACKET 100

All FOS 100 SOLO models are available with Z10 power supply IP65 or IP20 rated
All FOS 100 models are also available without integrated power supply
All FOS 100 models are also available with spot / medium flood / wide flood lenses

LED technology
FOS 100+/SOLO FULL COLOUR: 15 x 3W P5 II Full colour LEDs
16 million colours; linear colour temperature 3200°K ÷ 5500°K; 16 selectable types of White.
FOS 100/SOLO RGBA: 48 x 1W P4 LEDs (12 x Red, 12 x Green, 12 x Blue, 12 x Amber) 16 million colours; linear colour temperature 3200°K ÷ 5500°K; 16 selectable types of White.
FOS 100/SOLO WHITE: 48 x 1W P4 LEDs (36 x White, 12 x Amber); Linear colour temperature 3200°K ÷ 5500°K; 16 selectable types of White.
No infrared emission; no ultraviolet emission
LEDs average lifespan: 100.000 hours
Optical units
3 lenses sets available (Spot, Medium flood, Wide flood)
Control
Via any DMX lighting console
Protection
IP65 or IP20 (FOS 100 SOLO / FOS 100+ SOLO) protection level against the penetration of solids and liquids
Construction
FOS is made on aluminium and steel
Power supply
Integrated power supply (FOS 100 SOLO / FOS 100+ SOLO) / LED controller
(Z10 IP65 or Z10 IP20);
External dedicated (FOS 100) Z1, Z4 or Z8 power supplies / LED controllers
Connection
M12 connection system between Power supply and LED bar (All versions).
Powerconn + XLR connectors (FOS 100 SOLO IP20 / FOS 100+ SOLO IP20);
Harting connectors (FOS 100 SOLO IP65 / FOS 100+ SOLO IP65)

MAIN ELECTRICAL CHARACTERISTICS (FOS 100 SOLO / FOS 100+ SOLO)

Input Voltage Range : Vin 90 - 260 Vac
Frequency : 50 - 60 HZ
Power Consumption Range : 6 - 100 W
Power Factor (Pf) : 0.95 electronic PFC controller
Efficiency : 90% typical

Output:
Power Output Range : 4 channels output (RGBA) 1,5 - 25W per channel
Output Current : 350 mA @ 100% per channel (500mA @ 100% per channel in BOOST Mode)
Output Voltage : Vout 70V

Control Input:
Control Signal : DMX 512
Dimming System :Constant Current PWM
Address Range : DMX 512 channels addressable by display

ACCESSORIES
• Lenses set Spot available for each model
• Lenses set Medium flood available for each model
• Lenses set Wide flood available for each model
• 10XAWG26 multipolar black outdoor cable (Cod. 0509C061)
• M12 female (8 pole) cable connector (Cod. 0520P050)
• M12 male (8 pole) cable connector (Cod 0520P051)
• Z10 Outdoor (IP65) power supply / LED controller (grey) (Cod. 03.LA.020.IP65.26)
• Z10 Indoor (IP20) power supply / LED controller (grey) (Cod. 03.LA.020.26)
• Z1 power supply / LED controller (Cod. 03.LA.009)
• Z4 RACK power supply / LED controller (Cod. 03.LA.014)
• Z8 RACK power supply / LED controller (Cod. 03.LA.075)
• Z1 OUTDOOR power supply / LED controller (Cod. 03.LA.009.IP65)

IMPORTANT SAFETY INFORMATION

Fire prevention:

Never locate the fixture on any flammable surface.
Minimum distance from flammable materials: 10 cm
Replace any blown or damaged fuses only with those of identical value

Prevention from electric shock:

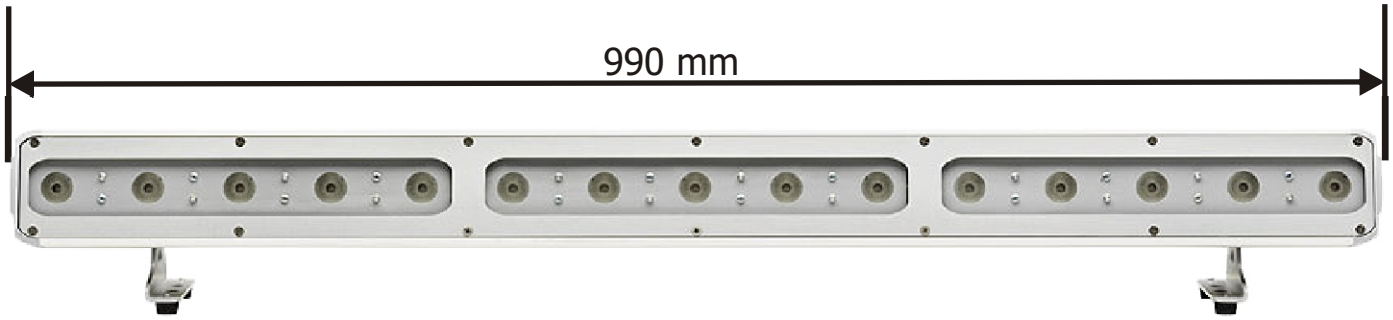
High voltage is present inside the unit.
Unplug the unit prior to performing any operation which involves touching the inside of the unit.
This equipment must be grounded, do not connect to non-grounded supplies.
The use of a thermal magnetic circuit breaker is recommended for each FOS 100 SOLO unit.
Use only AC supplies 90-260V, 50-60Hz FOS 100 SOLO IP20 model should never be located in position exposed to rain or in areas of extreme humidity.
A good air ventilation is essential for proper equipment work.

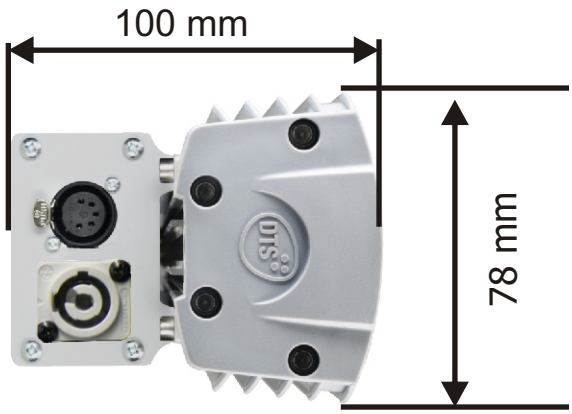
Safety:

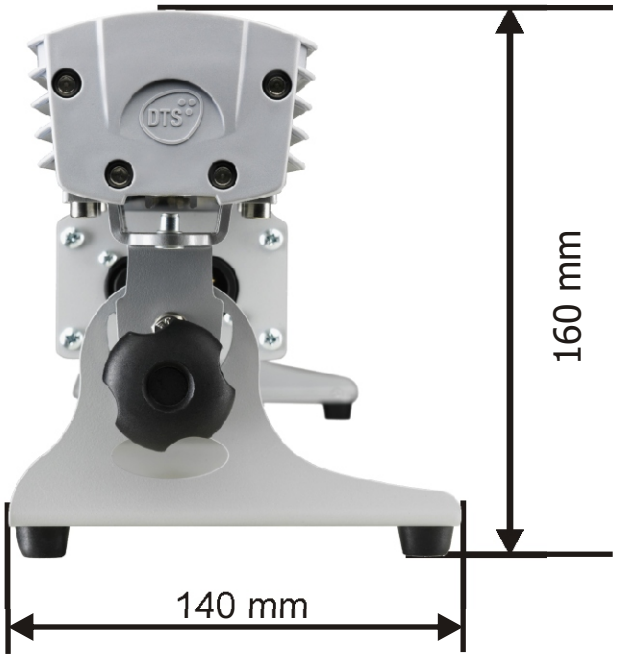
The external surface of the unit may exeed 50°C; never handle the unit until at least 5 minutes have elapsed since the unit was turned off.
Never install the unit in an enclosed area lacking sufficient air flow.
The ambient temperature should not exeed 40°C and should not be lower than -10°C

UNIT DIMENSIONS:

FOS 100 SOLO/ FOS 100+ SOLO





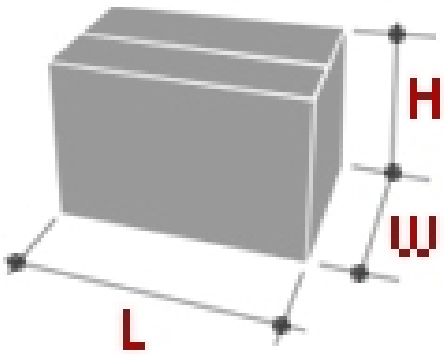


Unit Dimensions
(LxWxH)
990 x 100 x 78 mm

Weight
7 Kg

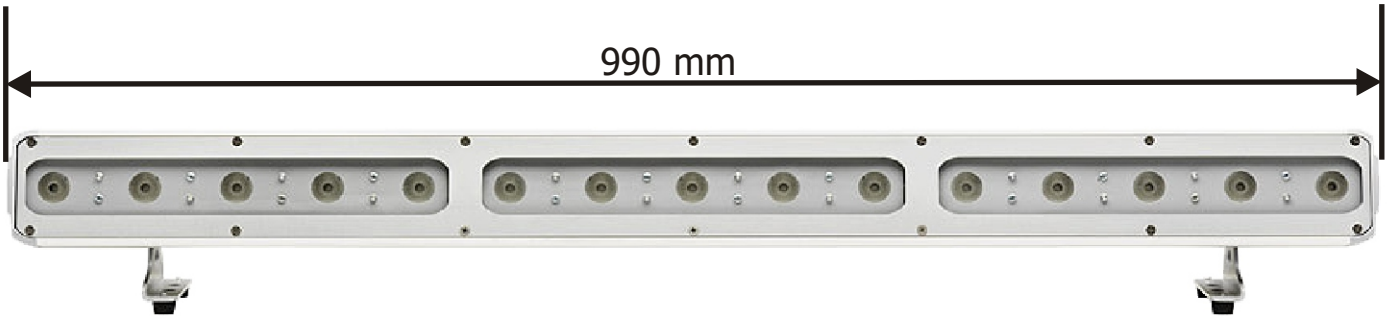
Packing Dimensions
(LxWxH)
1060 x 160 x 200 mm

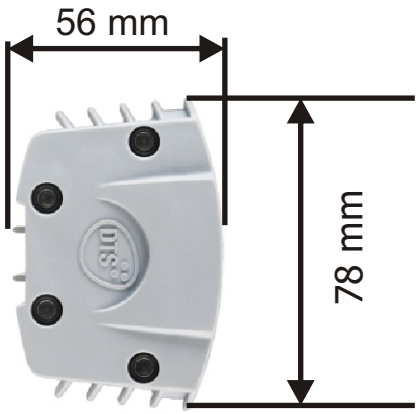
Weight
8,5 Kg

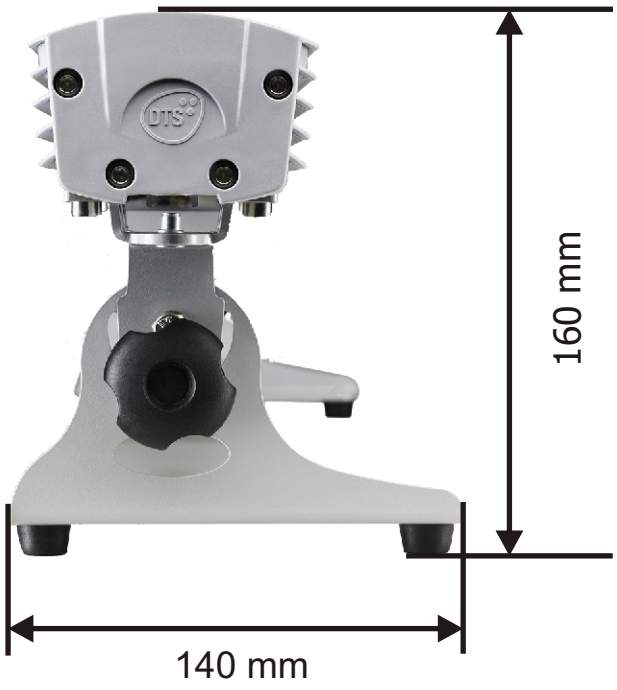


UNIT DIMENSIONS:

FOS 100 / FOS 100+





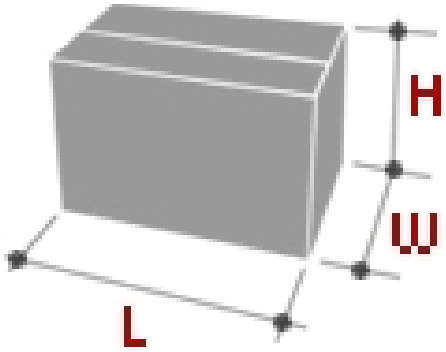


Unit Dimensions
(LxWxH)
990 x 56 x 78 mm

Weight
5,5 Kg

Packing Dimensions
(LxWxH)
1060 x 160 x 200 mm

Weight
7 Kg

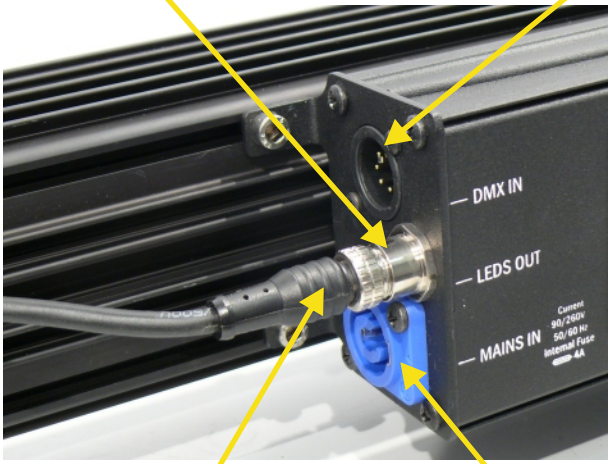


INPUT/OUTPUT CONNECTIONS

FOS 100 SOLO IP20 / FOS 100+ SOLO IP20

M12 LED output
Female panel connector

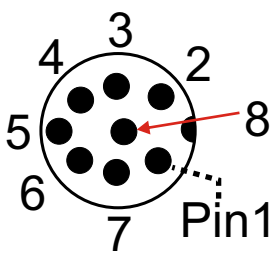
DMX IN/OUT
XLR 5 pins Male / Female
Panel Connectors



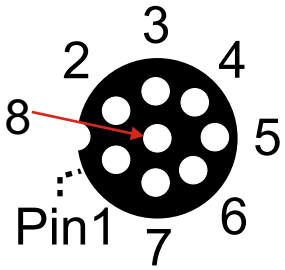
Mains 90-260 V AC
50-60 Hz input Powercon
Female panel connector

Mains 90-260 V AC
50-60 Hz output Powercon
Female panel connector
MAX load:
230 V AC = 20 FOS 100 SOLO
100 V AC = 10 FOS 100 SOLO

M12 LED input
Male cable connector



M12 LED output
Female panel connector



LEDS
CONNECTOR PINOUT

1-RED + (FC / RGBA / WHITE)
2-RED - (FC / RGBA / WHITE)
3-GREEN + (FC / RGBA / WHITE)
4-GREEN - (FC / RGBA / WHITE)
5-BLUE + (FC / RGBA / WHITE)
6-BLUE - (FC / RGBA / WHITE)
7-AMBER - (RGBA / WHITE)
8-AMBER + (RGBA / WHITE)

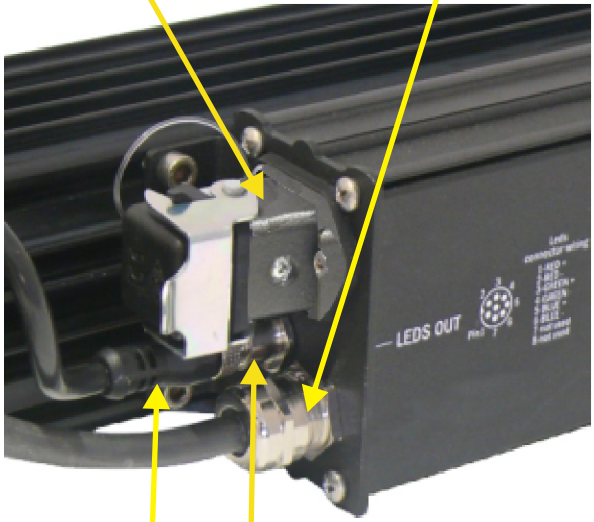
INPUT/OUTPUT CONNECTIONS

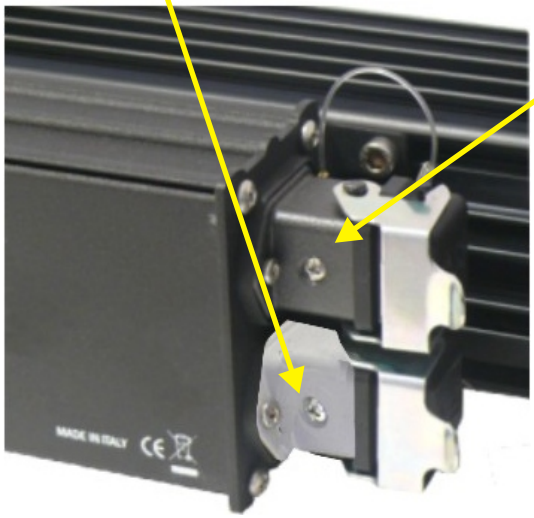
FOS 100 SOLO IP65 / FOS 100+ SOLO IP65

Mains 90-260 V Ac
50-60 Hz input cable

Mains 90-260 V Ac
50-60 Hz output ILME 5 pins
Female panel connector
MAX load:
230 V Ac = 20 FOS 100 SOLO
100 V Ac = 10 FOS 100 SOLO

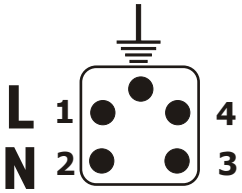
DMX IN/OUT
ILME 4 pins Female
Panel Connectors



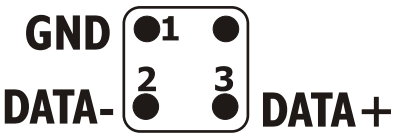


DMX IN/OUT
ILME 4 pins Female
Panel Connectors

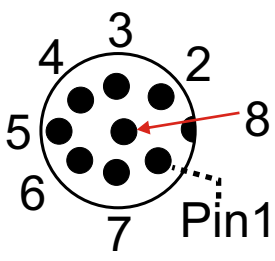
MAINS OUTPUT
FEMALE PANEL CONNECTOR



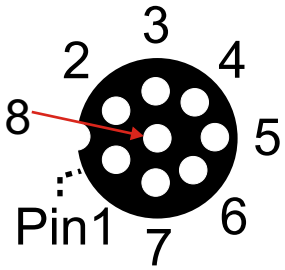
DMX IN-OUT
FEMALE PANEL CONNECTOR



M12 LED input
Male cable connector



M12 LED output
Female panel connector



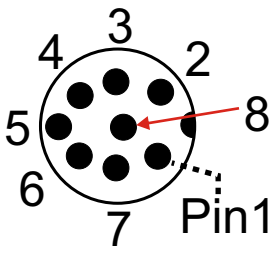
LEDS
CONNECTOR PINOUT

1-RED + (FC / RGBA / WHITE)
2-RED - (FC / RGBA / WHITE)
3-GREEN + (FC / RGBA / WHITE)
4-GREEN - (FC / RGBA / WHITE)
5-BLUE + (FC / RGBA / WHITE)
6-BLUE - (FC / RGBA / WHITE)
7-AMBER - (RGBA / WHITE)
8-AMBER + (RGBA / WHITE)

INPUT/OUTPUT CONNECTIONS

FOS 100 / FOS 100+

M12 LED input
Male cable connector



LEDS
CONNECTOR PINOUT

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3-GREEN + (FC / RGBA / WHITE)
4-GREEN - (FC / RGBA / WHITE)
5-BLUE + (FC / RGBA / WHITE)
6-BLUE - (FC / RGBA / WHITE)
7-AMBER - (RGBA / WHITE)
8-AMBER + (RGBA / WHITE)

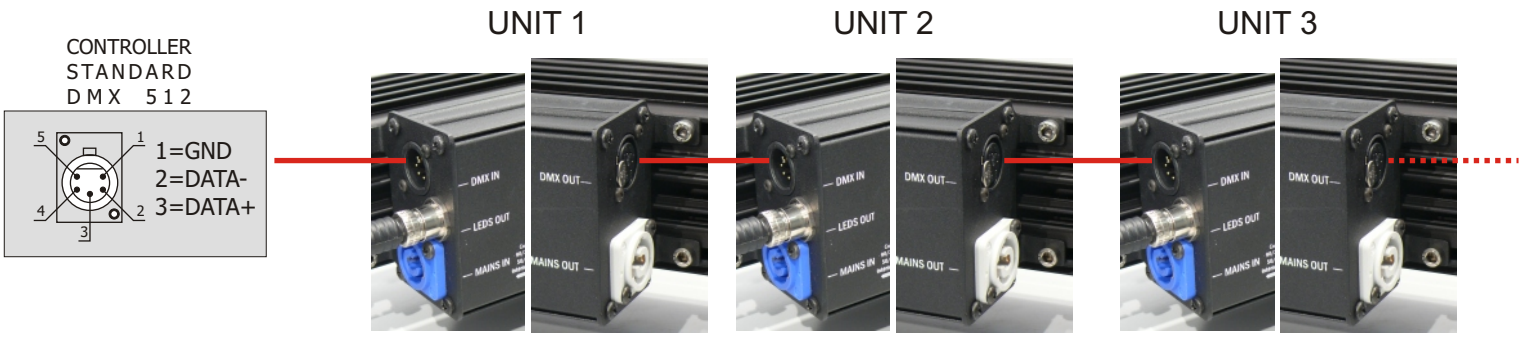
For application where IP65 rating is not necessary, FOS 100 / 100+ cabling connection can be done with a standard UTP TIA/EIA 568-B2 category 5E cable.
The maximum distance between power supply and the unit should not exceed 100 meters.

For IP65 rating application, D.T.S. reccomed the use of a IP65/68 cable as the 10XAWG26 multipolar black outdoor cable (IP68) (D.T.S. Code: 0509C061).
The maximum distance between power supply and the unit should not exceed 100 meters.

DMX SIGNAL CONNECTION:

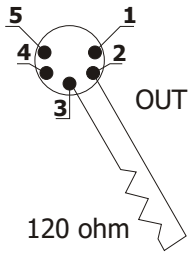
FOS 100 SOLO IP20 / FOS 100+ SOLO IP20

The unit operates using a digital DMX 512 signal. Connection between the controller and the unit or between units must be carried out using a two pair screened ø0.5 mm.
Ensure that the conductors do not touch each other. Do not connect the cable ground to the DMX connector chassis. The plug housing must be isolated. Connect the mixer signal to the DMX IN projector plug and connect it to the next projector by connecting the DMX OUT plug on the first unit to the DMX IN plug of the second one.
In this way, all the projectors are cascade connected.

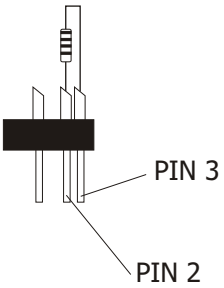


P.S:
If the display showing the DMX address flashes, then one of the following errors has occurred:
- DMX signal not present
- DMX reception problem

For Installations where long distance DMX cable connections are needed, we suggest to use a DMX terminator.
The DMX terminator is a male XLR 3-5 pins connector with a 120 ohm resistor Between pin 2 and 3.
The DMX terminator must be plugged into the last unit (DMX out panel connector) of the DMX line.



PLACE A 120 OHM RESISTOR BETWEEN PIN 2 AND 3 OF A MALE XRL CONNECTOR AND PLUG IT INTO THE DMX OUT PANEL CONNECTOR OF THE LAST UNIT CONNECTED TO THE DMX LINE

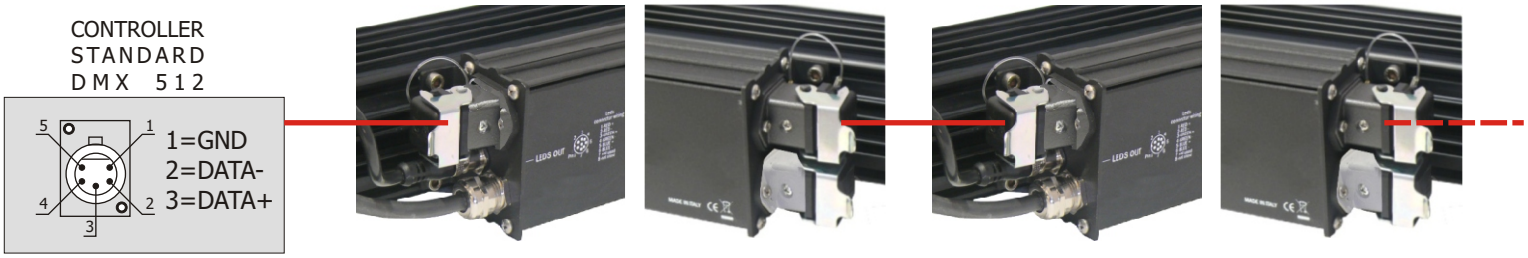


The standard configuration of the FOS 100 SOLO FULL COLOUR is with XLR 5 pins connectors.

DMX SIGNAL CONNECTION:

FOS 100 SOLO IP65 FOS 100+ SOLO IP65

The unit operates using a digital DMX 512 signal. Connection between the controller and the unit or between units must be carried out using a two pair screened ø0.5 mm.
Ensure that the conductors do not touch each other. Do not connect the cable ground to the DMX connector chassis. The plug housing must be isolated. Connect the mixer signal to the DMX IN projector plug and connect it to the next projector by connecting the DMX OUT plug on the first unit to the DMX IN plug of the second one.
In this way, all the projectors are cascade connected.



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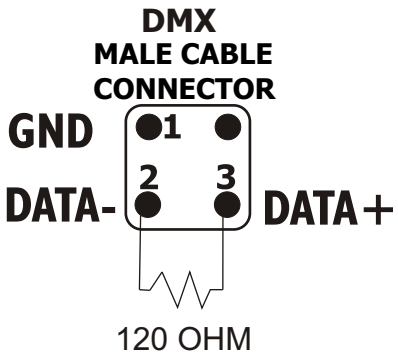
The DMX terminator is a male DMX cable connector with a 120 ohm resistor Between pin 2 and 3.
The DMX terminator must be plugged into the DMX out panel connector of the last unit connected to the DMX line.



PLACE A 120 OHM RESISTOR BETWEEN PIN 2 AND 3 OF A MALE DMX CONNECTOR AND PLUG IT INTO THE DMX OUT PANEL CONNECTOR OF THE LAST UNIT CONNECTED TO THE DMX LINE

DMX ADDRESS

FOS 100+ SOLO FULL COLOR can be used in seven different modes: 9 DMX channels mode (default), 5 DMX channels mode (Shutter + Dimmer + RGB), WALL mode (6 DMX channels; for use with DTS Wall mounted DMX controller 0514L007), M3CH mode (4 DMX channels; Dimmer + RGB), RGB mode (3 channels), 1 DMX channel mode or CUSTOM DMX mode (not yet implemented).
FOS 100 SOLO RGBA and FOS 100 SOLO WHITE can be used in seven different modes: 10 DMX channels mode (default), 6 DMX channels mode (Shutter + Dimmer + RGBA), WALL mode (6 DMX channels; for use with DTS Wall mounted DMX controller 0514L007), M4CH mode (5 DMX channels; Dimmer + RGBA), RGBA mode (4 channels), 1 DMX channel mode or CUSTOM DMX mode (not yet implemented).

If you want to use the FOS 100+ SOLO FULL COLOUR in "WALL" mode, select the "WALL" mode from the MODE menu and set the following addresses on the mixer: **(To be used only with DTS Wall mounted DMX controller 0514L007)**

Projector 1 A001
Projector 2 A009
Projector 3 A017
….. A….
projector 6 A041

If you want to select the next projector, just add "8"
DTS Wall mounted DMX controller 0514L007 assign 8 DMX channels per unit also if some channels are not used

If you want to use the FOS 100+ SOLO FULL COLOUR in 9 channels mode, select the 9 CH mode from the MODE menu and set the following addresses on the mixer:

Projector 1 A001
Projector 2 A010
Projector 3 A019
….. A….
projector 6 A046

If you want to select the next projector, just add "9"

If you want to use the FOS 100 SOLO RGBA / WHITE in 10 channels mode, select the 10 CH mode from the MODE menu and set the following addresses on the mixer:

Projector 1 A001
Projector 2 A011
Projector 3 A021
….. A….
projector 6 A051

If you want to select the next projector, just add "10"

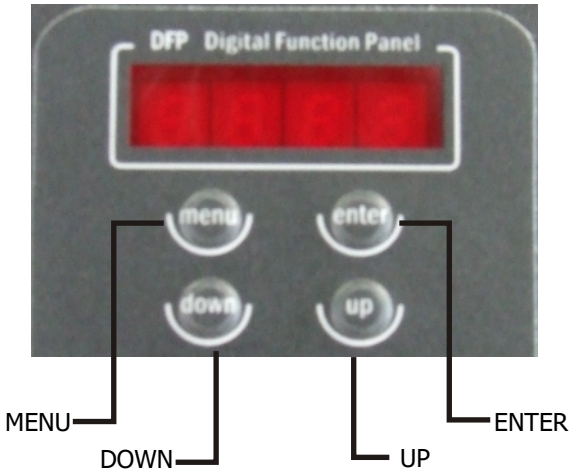
Selecting the DMX address

1) Press the UP-DOWN key until you reach the required DMX address. The numbers on the display will start to flash (but the new DMX address hasn't yet been set).
2) Press ENTER to confirm your selection. The numbers on the display will stop flashing and the projector is now controlled by the new DMX address.

TIPS: if you keep pushed the UP or DOWN keys, the channels are calculated more quickly and you get a faster selection.

DISPLAY FUNCTIONS

FOS 100+ SOLO FULL COLOUR



DISPLAY FUNCTIONS

The FOS 100+ SOLO FULL COLOUR display panel shows all the available functions . Using these functions, it is possible to change some of the parameters and add some functions. Changing the D.T.S. setting can vary the functions of the unit so that it does not respond to the DMX 512 signal used to control it. Carefully follow the instructions below before carrying out any variations or selections.

NOTE: the symbol ☞ shows which key has to be pushed to obtain the desired function.

Software version 2.14 and 4.0

A001 — MENU ☞ Up-Down ☞ dISP — ENTER ☞ Up-Down ☞ POS1 — ENTER ☞ Up-Down ☞

REVERSE DISPLAY
Reverses display's reading depending on the mounting position
(On the ground or suspended).

- AA — Floor position — ENTER ☞
- UU — Suspension position — ENTER ☞

DISPLAY STAND BY
To turn off the display (after 5 seconds)
Or leave it always on.

Up-Down ☞ StbY — ENTER ☞ Up-Down ☞

- oFF — Display OFF — ENTER ☞
- on — Display always ON — ENTER ☞

MENU ☞ Up-Down ☞ MODE — ENTER ☞ Up-Down ☞ 9CH — 9 CHANNELS — ENTER ☞ — Default DMX Mode = 9 CH

DMX MODE
To select DMX mode : 9 DMX channels mode (default), 5 DMX channels mode (Shutter + Dimmer + RGB), WALL mode (6 DMX channels; for use with DTS Wall mounted DMX controller 0514L007), M3CH mode (4 DMX channels; Dimmer + RGB), RGB mode (3 channels), 1 DMX channel mode.

AUX mode let you activate an external ON -OFF control on IR connector.
(not implemented on FOS 100 SOLO)

CUSTOM DMX mode let you set the parameters for Shutter, Dimmer, Red, Green, Blue, Ctc, Macro and Function to the desired DMX channels.
(not yet implemented)

MACRO
MACRO Function, enable channel mapping macro rainbow effects
STD (default)

- Up-Down ☞ 6ALL — 6 CHANNELS — ENTER ☞
- Up-Down ☞ 1CH — 1 CHANNEL — ENTER ☞
- Up-Down ☞ rGb — RGB (3 CHANNELS) — ENTER ☞
- Up-Down ☞ 5CH — 5 CHANNELS — ENTER ☞ — Shutter + Dimmer + RGB
- Up-Down ☞ M3cH — M3CH (4 CHANNELS) — ENTER ☞ — Dimmer + RGB
- Up-Down ☞ CUSt — ENTER ☞ Up-Down ☞
  - SEL — ENTER ☞ — Custom mode enabled
  - ShoU — ENTER ☞ — Show Custom settings
  - SEt — ENTER ☞ — Parameters Setting on Custom Mode
- Up-Down ☞ AUX — AUX MODE — ENTER ☞ — External ON - OFF control on IR connector (not implemented on FOS 100 SOLO)
- Up-Down ☞ MACr — ENTER ☞ Up-Down ☞
  - Std — ENTER ☞ — Standard mode enabled: (Default).
  - EXt — ENTER ☞ — Extended mode enabled: Rainbow effects on MACRO channel.

MENU Up-Down LED ENTER Up-Down rED ENTER Up-Down MIn Default = 0 ENTER

LED
RGB Min/Max, Smooth, Compression, Sync and Boost level values settings

MAX Default = 255 ENTER

Up-Down

RGB MINIMUM VALUES
This menu allow to select the minimum levels for Red,Green and Blue

GrEE ENTER Up-Down MIn Default = 0 ENTER

MAX Default = 255 ENTER

RGB MAXIMUM VALUES
This menu allow to select the maximum levels for Red,Green and blue

Up-Down

bLUE ENTER Up-Down MIn Default = 0 ENTER

MAX Default = 255 ENTER

These settings have priority on Master Dimmer channel

Up-Down

SMTH ENTER Up-Down 4 Range = Off-20 Default = 4 ENTER

SMOOTH VALUE
This menu allow to select the value of the delay (in millisecons) for RGB and Dimmer channels reaction to DMX or Program variation.
Off=25 ms delay (Fast response)
20=250 ms delay (Slow response)

Off = 25 ms
Istant responce to DMX variation

20 = 250 ms
Smooth response to DMX variation

COMPRESSION
This menu allow to select between Linear courrent output or Quadratic courrent output for LEDs
Default = Linear

Up-Down

COMP ENTER Up-Down LInE Linear = Linear courrent output ENTER

QUAd Quadratic = Linear light output ENTER

SYNC
This menu allow to adjust the PWM frequency value (Hz) in order to reduce flickering in the process of your camera recordings

Up-Down

SYnc ENTER Up-Down 610 Range = 610 Hz -10 KHz Default = 610 Hz ENTER

bSt ENTER Up-Down On Boost mode activated ENTER

BOOST DRIVING
This menu allow to increase the LED's current from 350mA to 500 mA

Up-Down OFF Boost mode deactivated ENTER

Whit BOOST active,the LED's current is set to 500mA (30%more gain).
Default = Disable

AUTOMATIC MODE
Automatic demo game without DMX controller

ChPr
Chase with 16 steps previously created in REC MODE
Speed and Wait time selectable by user

CUPr
RGB values selectable by user

Rainbow (rAIn)
Rainbow colours effect.
Speed time selectable by user

CU01-CU16
Color Macros as on DMX channel 8 (Macro)

WHITE MACROS
16 macros for White color from 2800 to 6500 ° K

DIMMER
Dimmer level selectable by user as on DMX channel 2 (Dimmer)
Dimmer level is active for all the programs and macros

SHUTTER
Shutter level selectable by user as on DMX channel 1 (Shutter)
Shutter level is active only for CU01/CU16 and Wh01/Wh16 macros

ESC
Esc from Automatic Mode Menu

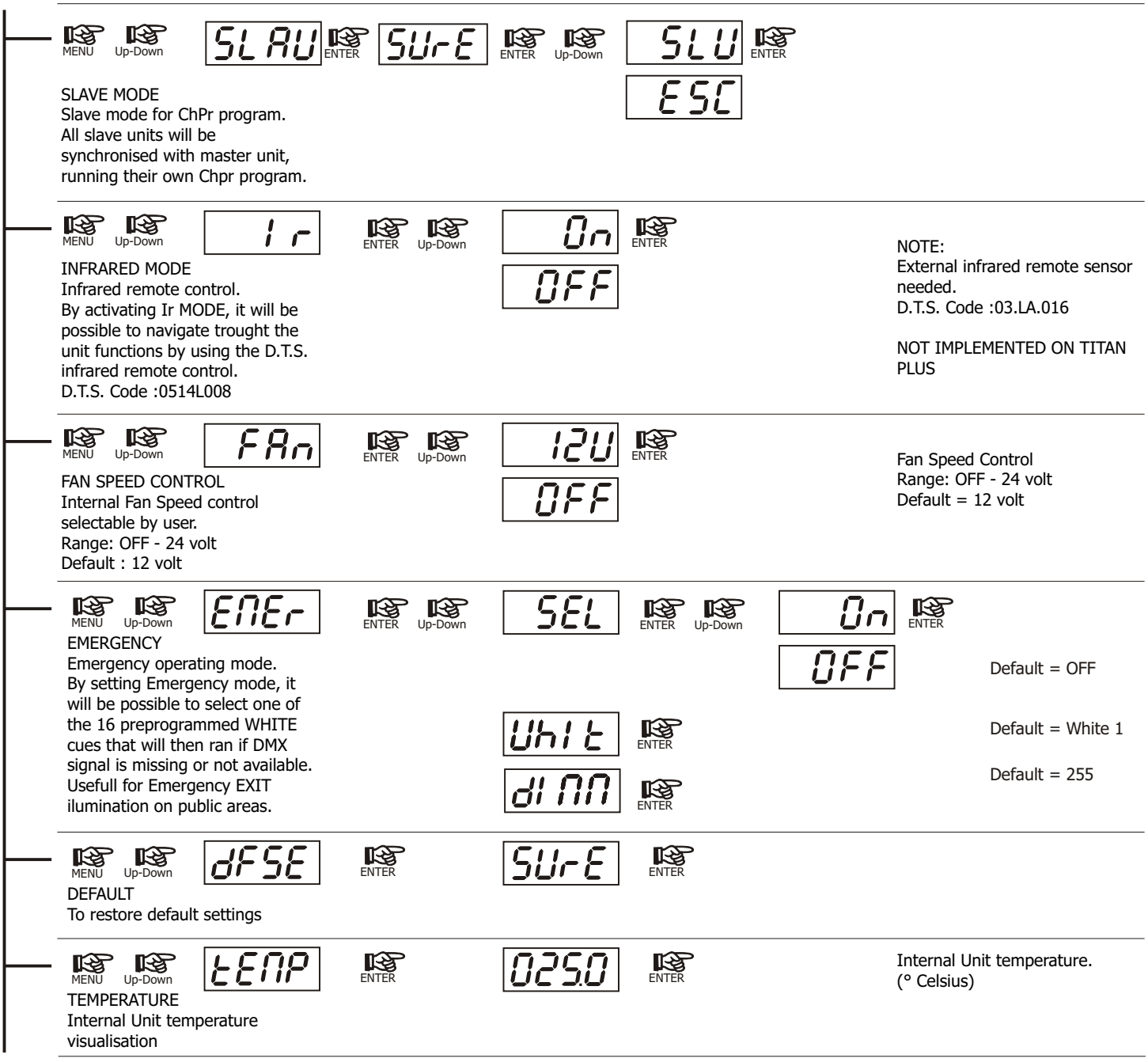
REC MODE
In DMX Recorder Mode,it is possible to create and store the scenes of the ChPr by using an external DMX controller.
The unit must be set to 9 channels MODE

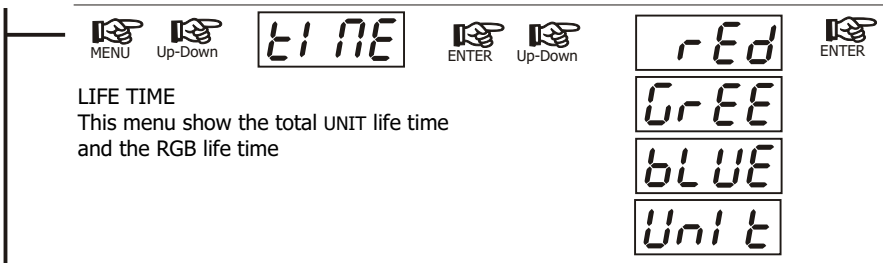
DMX Recorder Mode
For the programming of ChPr by using a DMX controller, besides the 9 channels necessary to control the unit a further 3 DMX channels are needed.
So that in RECORDER mode (via DMX) the unit will need 12 channels to be correctly programmed.
The three new DMX channels are:

DMX channel 10 = SCENES channel
From 0-10 = no function (r001)
From 11-255 are displayed the programmable scenes (max 16 scenes from M001 to M0016)

DMX channel 11 = EDIT channel:
-From 0-19 = no function
-From 20-234 the unit runs the configuration given by the received input DMX values.
With the channel SCENES it is possible to pass from one step to the next while with REC it is possible to record the selected scene.
-From 235-255 the unit runs the configuration given by the received input DMX values closing the sequence as last scene.
With the channel REC it is possible to record the selected scene as last scene.

DMX channel 12 = RECORDING channel
Records the set scene with a variation between 0 to 255 (the display flashes indicating that the scene has been recorded).It is advised that you keep the REC channel set to 0 and to run through the 255 only once you have decided to save the scene. If ChPr is not closed, by indicating the last scene (Edit channel between 235-255), in playback mode all 16 scenes will be played through even if not programmed





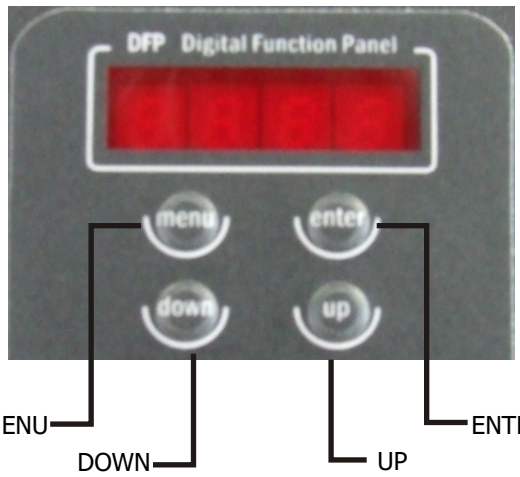
LIFE TIME
This menu show the total UNIT life time
and the RGB life time

TEST MODE
RGB colours test with rainbow

SOFTWARE
Software version

DISPLAY FUNCTIONS

FOS 100 SOLO RGBA
FOS 100 SOLO WHITE



DISPLAY FUNCTIONS

The FOS 100 SOLO RGBA / WHITE display panel shows all the available functions . Using these functions, it is possible to change some of the parameters and add some functions. Changing the D.T.S. setting can vary the functions of the unit so that it does not respond to the DMX 512 signal used to control it. Carefully follow the instructions below before carrying out any variations or selections.

NOTE: the symbol ☞ shows which key has to be pushed to obtain the desired function.

Software version 2.14 and 4.0

A001 — MENU ☞ Up-Down ☞ **d ISP** — ENTER ☞ Up-Down ☞ **POS1** — ENTER ☞ Up-Down ☞

- **AA** Floor position — ENTER ☞
- **UU** Suspension position — ENTER ☞

REVERSE DISPLAY
Reverses display's reading depending on the mounting position
(On the ground or suspended).

Up-Down ☞ **StbY** — ENTER ☞ Up-Down ☞

- **oFF** Display OFF — ENTER ☞
- **on** Display always ON — ENTER ☞

DISPLAY STAND BY
To turn off the display (after 5 seconds)
Or leave it always on.

MENU ☞ Up-Down ☞ **nOdE** — ENTER ☞ Up-Down ☞

- **10CH** 10 CHANNELS — ENTER ☞ Default DMX Mode = 10 CH
- Up-Down ☞ **UALL** 6 CHANNELS — ENTER ☞
- Up-Down ☞ **1CH** 1 CHANNEL — ENTER ☞
- Up-Down ☞ **rGbA** RGBA (4 CHANNELS) — ENTER ☞
- Up-Down ☞ **6CH** 6 CHANNELS — ENTER ☞
- Up-Down ☞ **M4cH** M4CH (5 CHANNELS) — ENTER ☞ Dimmer + RGBA
- Up-Down ☞ **CUSt** — ENTER ☞ Up-Down ☞
  - **SEL** — ENTER ☞ Custom mode enabled
  - **ShoU** — ENTER ☞ Show Custom settings
  - **SEt** — ENTER ☞ Parameters Setting on Custom Mode
- Up-Down ☞ **AUH** AUX MODE — ENTER ☞ External ON - OFF control on IR connector (not implemented on FOS 100 SOLO)
- Up-Down ☞ **MACr** — ENTER ☞ Up-Down ☞
  - **Std** — ENTER ☞ Standard mode enabled: (Default).
  - **EHt** — ENTER ☞ Extended mode enabled: Rainbow effects on MACRO channel.

DMX MODE
To select DMX mode : 10 DMX channels mode (default), 6 DMX channels mode (Shutter + Dimmer + RGBA), WALL mode (6 DMX channels; for use with DTS Wall mounted DMX controller 0514L007), M4CH mode (5 DMX channels; Dimmer + RGBA), RGBA mode (4 channels), 1 DMX channel mode.

AUX mode let you activate an external ON -OFF control on IR connector.
(not implemented on FOS 100 SOLO)

CUSTOM DMX mode let you set the parameters for Shutter, Dimmer, Red, Green, Blue, Amber, Ctc, Macro and Function to the desired DMX channels.
(not yet implemented)

MACRO
MACRO Function, enable channel mapping macro rainbow effects
STD (default)

MENU Up-Down → LED → ENTER Up-Down → rED → ENTER Up-Down → MIN Default = 0 → ENTER

LED
RGBA Min/Max, Smooth and Compression level values settings

MAX Default = 255 → ENTER

Up-Down → GrEE → ENTER Up-Down → MIN Default = 0 → ENTER

RGBA MINIMUM VALUES
This menu allow to select the minimum levels for Red, Green, Blue and Amber

MAX Default = 255 → ENTER

Up-Down → bLUE → ENTER Up-Down → MIN Default = 0 → ENTER

RGBA MAXIMUM VALUES
This menu allow to select the maximum levels for Red, Green, Blue and Amber

MAX Default = 255 → ENTER

→ AMbr → ENTER Up-Down → MIN Default = 0 → ENTER

These settings have priority on Master Dimmer

MAX Default = 255 → ENTER

Up-Down → SMTH → ENTER Up-Down → 4 Range = Off - 20 Default = 4 → ENTER

SMOOTH VALUE
This menu allow to select the value of the delay (in millisecons) for RGBA and Dimmer channels reaction to DMX or Program variation.
Off = 25 ms delay (Fast response)
20 = 250 ms delay (Slow response)

Off = 25 ms
Istant responce to DMX variation

20 = 250 ms
Smooth response to DMX variation

Up-Down → COMP → ENTER Up-Down → LInE Linear = Linear courrent output → ENTER

QUAd Quadratic = Linear light output → ENTER

COMPRESSION
This menu allow to select between Linear current output or Quadratic current output for LEDs
Default = Linear

Up-Down → SYnc → ENTER Up-Down → 610 Range = 610 Hz -10 KHz Default = 610 Hz → ENTER

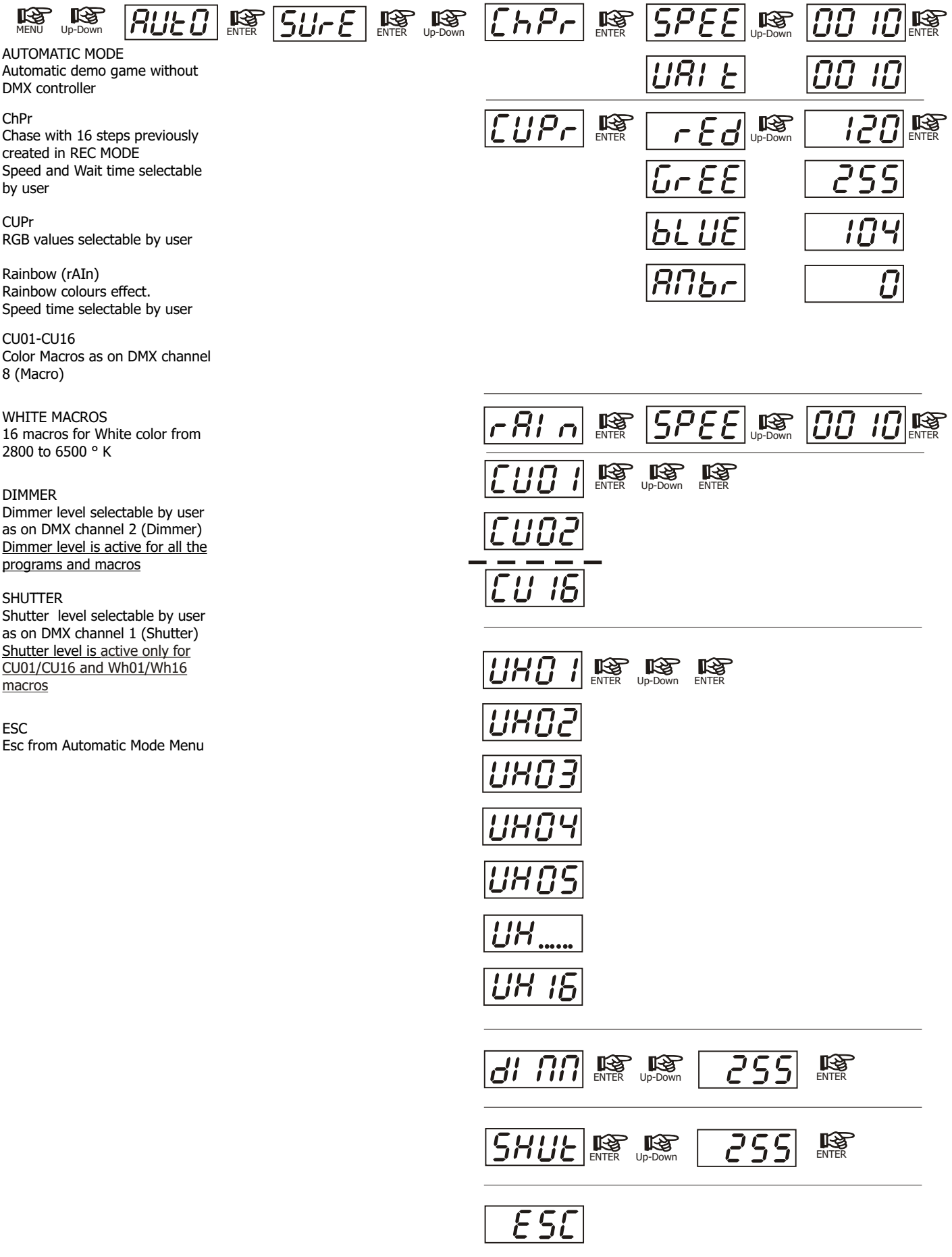
SYNC
This menu allow to adjust the PWM frequency value (Hz) in order to reduce flickering in the process of your camera recordings

bSt → ENTER Up-Down → On Boost mode activated → ENTER

Up-Down → OFF Boost mode deactivated → ENTER

BOOST DRIVING
This menu allow to increase the LED's current from 350mA to 500 mA

Whit BOOST active,the LED's current is set to 500mA (30%more gain).
Default = Disable



AUTOMATIC MODE
Automatic demo game without DMX controller

ChPr
Chase with 16 steps previously created in REC MODE
Speed and Wait time selectable by user

CUPr
RGB values selectable by user

Rainbow (rAIn)
Rainbow colours effect.
Speed time selectable by user

CU01-CU16
Color Macros as on DMX channel 8 (Macro)

WHITE MACROS
16 macros for White color from 2800 to 6500 ° K

DIMMER
Dimmer level selectable by user as on DMX channel 2 (Dimmer)
Dimmer level is active for all the programs and macros

SHUTTER
Shutter level selectable by user as on DMX channel 1 (Shutter)
Shutter level is active only for CU01/CU16 and Wh01/Wh16 macros

ESC
Esc from Automatic Mode Menu

MENU Up-Down [rEC] ENTER [10CH] ENTER [r001] [n001] [n002] [n0.....] [n0 16]

REC MODE
In DMX Recorder Mode,it is possible to create and store the scenes of the ChPr by using an external DMX controller.
The unit must be setted to 10 channels MODE

DMX Recorder Mode
For the programming of ChPr by using a DMX controller, besides the 10 channels necessary to control the unit a further 3 DMX channels are needed.
So that in RECORDER mode (via DMX) the unit will need 13 channels to be correctly programmed.
The three new DMX channels are:

DMX channel 11 = SCENES channel
From 0-10 = no function (r001)
From 11-255 are displayed the programmable scenes (max 16 scenes from M001 to M0016)

DMX channel 12 = EDIT channel:
-From 0-19 = no function
-From 20-234 the unit runs the configuration given by the received input DMX values.
With the channel SCENES it is possible to pass from one step to the next while with REC it is possible to record the selected scene.
-From 235-255 the unit runs the configuration given by the received input DMX values closing the sequence as last scene.
With the channel REC it is possible to record the selected scene as last scene.

DMX channel 13 = RECORDING channel
Records the set scene with a variation between 0 to 255 (the display flashes indicating that the scene has been recorded).It is advised that you keep the REC channel set to 0 and to run through the 255 only once you have decided to save the scene. If ChPr is not closed, by indicating the last scene (Edit channel between 235-255), in playback mode all 16 scenes will be played through even if not programmed

MENU Up-Down [SLAU] ENTER [SUrE] ENTER Up-Down [SLU] ENTER [ESC]

SLAVE MODE
Slave mode for ChPr program.
All slave units will be synchronised with master unit, running their own Chpr program.

MENU Up-Down [Ir] ENTER Up-Down [On] ENTER [OFF]

INFRARED MODE
Infrared remote control.
By activating Ir MODE, it will be possible to navigate trought the unit functions by using the D.T.S. infrared remote control.
D.T.S. Code :0514L008

NOTE:
External infrared remote sensor needed.
D.T.S. Code :03.LA.016
Not Implemented on TITAN PLUS

MENU Up-Down [FAn] ENTER Up-Down [12U] ENTER [OFF]

FAN SPEED CONTROL
Internal Fan Speed control selectable by user.
Range: OFF - 24 volt
Default : 12 volt

Fan Speed Control
Range: OFF - 24 volt
Default = 12 volt

MENU Up-Down [ENEr] ENTER Up-Down [SEL] ENTER Up-Down [On] ENTER [OFF]

EMERGENCY
Emergency operating mode.
By setting Emergency mode, it will be possible to select one of the 16 preprogrammed WHITE cues that will then ran if DMX signal is missing or not available.
Usefull for Emergency EXIT ilumination on public areas.

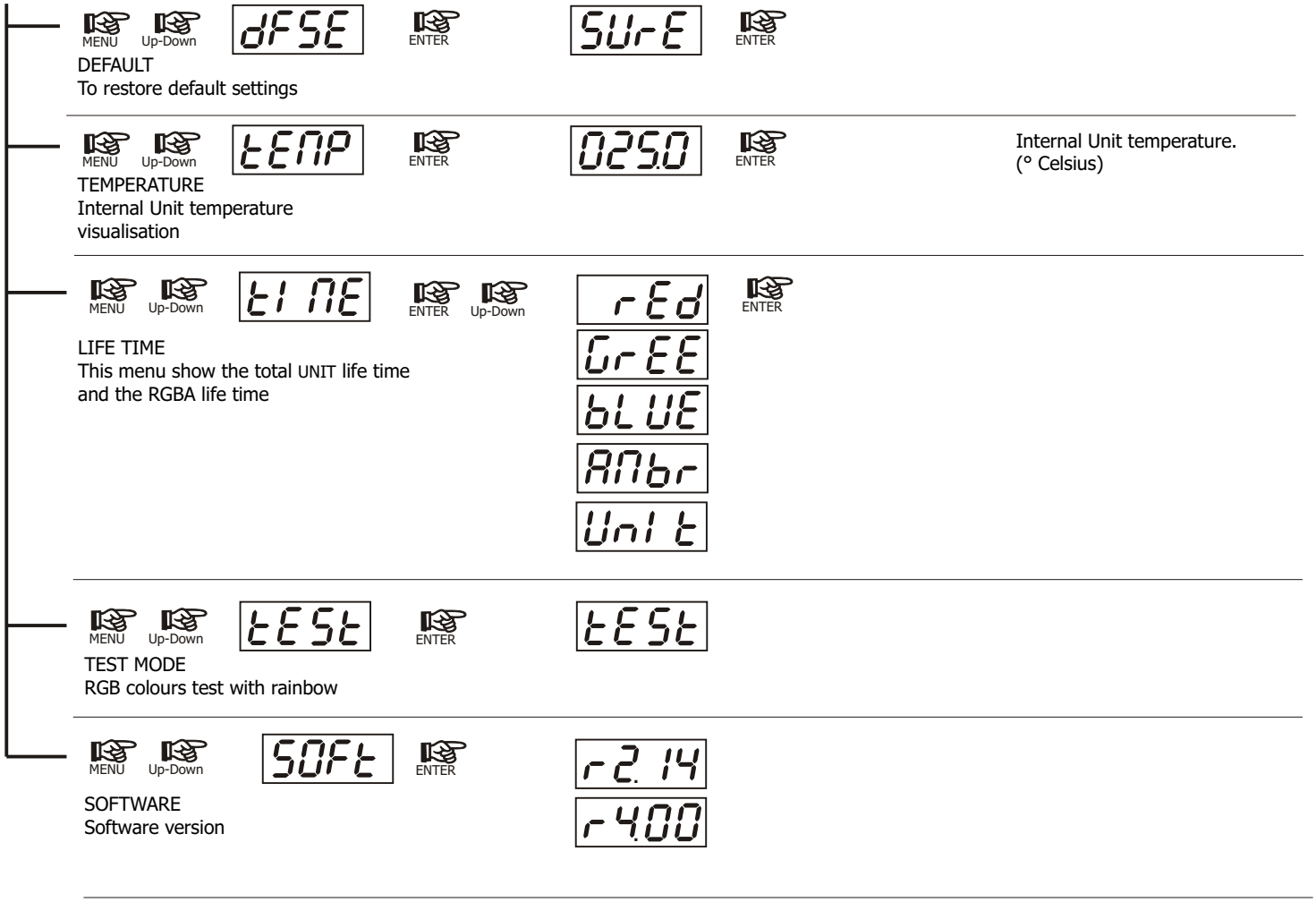
Default = OFF

[UhIt] ENTER

Default = White 1

[dIMM] ENTER

Default = 255



HIDDEN MENU

For technical personnel only

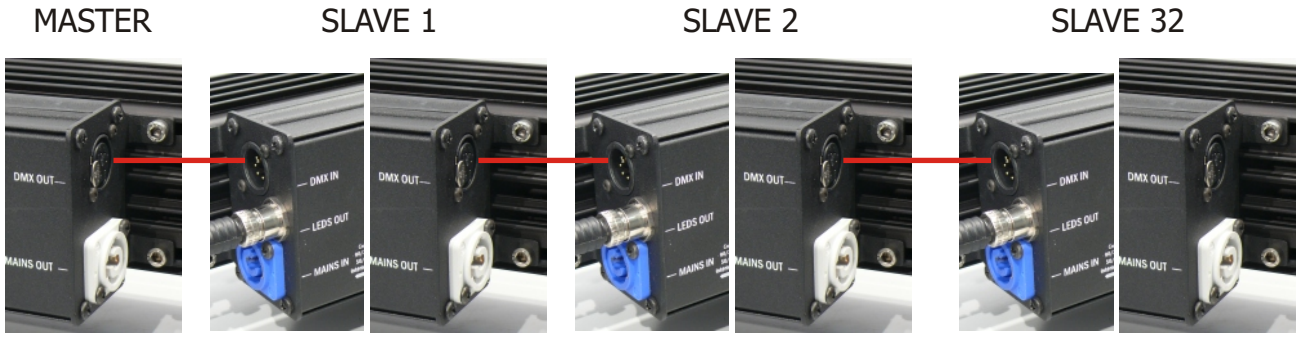
To operate this menu:
-Connect the unit to the main
-While reset is running, press the MENU and ENTER keys at the same time.

ChAn CHANNELS
This menu allow to set 3 channels or 4 channels LEDs output mode
3 LEDs channels output mode = FOS 100 PLUS SOLO FULL COLOUR
4 LEDs channels output mode = FOS 100 PLUS SOLO RGBA / FOS 100 PLUS SOLO WHITE

ESC EXIT
Exit from hidden menu.

AUTOMATIC OPERATION (AUTO):

FOS 100 SOLO / FOS 100+ SOLO can work in automatic mode without a DMX controller. First of all connect the projectors with a DMX cable (picture below). A maximum quantity of 32 slave units can be connected to the same Master unit.



To activate Auto mode on the first unit, use the menu to run through the different modes until AUTO appears on the display, and press enter.
Now it is possible to choose between the different pre-programmed games (CUPr-RAIn-CU01/CU16-Wh01/Wh16) or ChPr which is user programmable through REC mode. To confirm game activation press ENTER on the selected GAME.

CUPr-RAIn-CU01/CU16-Wh01/Wh16

The first unit that will work as a Master should be placed in Automatic mode (AUTO), the other units have to be placed in 9 channels DMX mode (MODE 9CH) for FOS 100+ SOLO FULL COLOUR or in 10 channels DMX mode (MODE 10 CH) for FOS 100 SOLO RGBA / WHITE and the DMX address should be set at A001. For RaIn (rainbow) game it is possible to select the speed for the colour changhing (SPEE).
DIMMER function (in AUTOMATIC MODE) is active for all the programs.
SHUTTER function (in AUTOMATIC MODE) is active only for CU01/CU16 and Wh01/Wh16 macros.

ChPr MASTER/SLAVE

The first unit that will function as a Master must be set to Automatic mode (AUTO), the other units must be set to Slave mode (SLAV), selectable through the menu. In this way all the Slave units will be synchronised with the master and running their own ChPr game.
On the master unit it is possible to vary the Speed time (SPEE) for the colour changhing and the Wait time (UAIt) between the steps.
Speed time and Wait time on the Master, have priority on the slave units.
NB: It is possible to run GA.Pr on the other units even though these do not have GA.Pr programmed. You can do this by setting the units to 9 ch DMX MODE for FOS 100+ SOLO FULL COLOUR or 10 channels DMX mode for FOS 100 SOLO RGBA / WHITE and selecting DMX address A001.

Rec mode

It is possible to program your own game on the FOS 100 SOLO / FOS 100+ SOLO that will then run it in AUTO mode (ChPr).
Each unit can have its own programmed game.
In REC mode the unit must be set to 9 channels mode for FOS 100+ SOLO FULL COLOUR and 10 channels mode for FOS 100 SOLO RGBA / FOS 100 SOLO WHITE.
To program the ChPr by using a DMX controller, you need 3 more channels in addition to the 9/10 channels necessary to control the unit.
So that in RECORDER mode (via DMX) the unit will need 12/13 DMX channels to be correctly programmed.
The three new DMX channels are:

FOS 100+ SOLO FULL COLOUR
DMX channel 10 = SCENES channel
From 0-10 = no function (r001)
From 11-255 are displayed the programmable scenes (max 16 scenes from M001 to M0016)

DMX channel 11 = EDIT channel:
-From 0-19 = no function
-From 20-234 the unit runs the configuration given by the received input DMX values.
With the channel SCENES it is possible to pass from one step to the next while with REC it is possible to record the selected scene.
-From 235-255 the unit runs the configuration given by the received input DMX values closing the sequence as last scene.
With the channel REC it is possible to record the selected scene as last scene.

DMX channel 12 = RECORDING channel
Records the set scene with a variation between 0 to 255 (the display flashes indicating that the scene has been recorded).It is advised that you keep the REC channel set to 0 and to run through the 255 only once you have decided to save the scene. If ChPr is not closed, by indicating the last scene (Edit channel between 235-255), in playback mode all 16 scenes will be played through even if not programmed

FOS 100 SOLO RGBA / FOS 100 SOLO WHITE
DMX channel 11 = SCENES channel
From 0-10 = no function (r001)
From 11-255 are displayed the programmable scenes (max 16 scenes from M001 to M0016)

DMX channel 12 = EDIT channel:
-From 0-19 = no function
-From 20-234 the unit runs the configuration given by the received input DMX values.
With the channel SCENES it is possible to pass from one step to the next while with REC it is possible to record the selected scene.
-From 235-255 the unit runs the configuration given by the received input DMX values closing the sequence as last scene.
With the channel REC it is possible to record the selected scene as last scene.

DMX channel 13 = RECORDING channel
Records the set scene with a variation between 0 to 255 (the display flashes indicating that the scene has been recorded).It is advised that you keep the REC channel set to 0 and to run through the 255 only once you have decided to save the scene. If ChPr is not closed, by indicating the last scene (Edit channel between 235-255), in playback mode all 16 scenes will be played through even if not programmed

DMX PROTOCOL

FOS 100+ SOLO FULL COLOUR

9 CHANNELS MODE (Default)

1 SHUTTER
2 DIMMER
3 RED
4 GREEN
5 BLUE
6 WHITE (Pre-programmed whites at different color temperatures)
7 CTC
8 COLOURS MACRO
9 FUNCTIONS

DMX CHANNEL	1	Parameter: **SHUTTER**

DMX range Value	Mid point DMX value	Move range (degrees)	Mode	Option	Function
0-9	**5**				**Black-out**
10-19	**14**				**Open**
20-29	**24**				**Black-out**
30-119					**Strobe at variable speed from slow to fast (3700ms-20ms)**
120-149					**Pulse open at variable speed from slow to fast (42,6s-100ms)**
150-179					**Pulse close at variable speed from slow to fast (42,6s-100ms)**
180-204	**192**				**Random Strobe (Master and RGB active)**
205-229	**218**				**Random Strobe (Full)**
230-234					**Red, Yellow, Cyan and Blue colour effects at variable speed**
235-255	**245**				**Open**

DMX CHANNEL	2	Parameter: **DIMMER**

DMX range Value	Mid point DMX value	Move range (degrees)	Mode	Option	Function
0-255					**Proportional dimmer**

DMX CHANNEL	3	Parameter: **RED**

DMX range Value	Mid point DMX value	Move range (degrees)	Mode	Option	Function
0-255					**Proportional colour**

DMX CHANNEL	4	Parameter: **GREEN**

DMX range Value	Mid point DMX value	Move range (degrees)	Mode	Option	Function
0-255					**Proportional colour**

DMX CHANNEL	5	Parameter: **BLUE**

DMX range Value	Mid point DMX value	Move range (degrees)	Mode	Option	Function
0-255					**Proportional colour**

DMX CHANNEL	6	Parameter: **WHITE (Pre-programmed White at diff. color temperature)**

DMX range Value	Mid point DMX value	Move range (degrees)	Mode	Option	Function
0-55	**23**				**No Function**
56-105	**80**				**Full (Red-Green-Blue at Full)**
106-155	**130**				**White DTS**

IF CHANNEL 9 (FUNCTIONS) = CUSTOM WHITE RECALL (Dmx range value 0 - 79)

156-205	**180**	**Custom White Recall**
206-255	**225**	**White CTC (Channel 7 CTC enabled 256 color temp. Correction Macros: 2800°K-6500°K)**

IF CHANNEL 9 (FUNCTIONS) = CUSTOM WHITE CREATE (Dmx range value 80 - 160)

156-205	**180**	**Custom White Create (RGB levels selectable by DMX)**
206-255	**225**	**White CTC (Channel 7 CTC enabled 256 color temp. Correction Macros: 2800°K-6500°K)**

DMX CHANNEL	7	Parameter: **CTC (Color temperature correction)**

DMX range Value	Mid point DMX value	Move range (degrees)	Mode	Option	Function

IF CHANNEL 6 (White) = WHITE CTC (Dmx range value 206 - 255)

0-255	**256 color temp. Correction Macros: 0 = 2800°K / 128 = 4500°K / 255 = 6500°K**

IF CHANNEL 6 (White) = NO FUNCTION (Dmx range value 0 - 55)

0-255	**No Function**

DMX CHANNEL	8	Parameter: **COLOUR MACROS**

IF: MENU Up-Down MODE ENTER Up-Down MACr ENTER Up-Down Std ENTER **PLEASE CHECK PAGE 13**

DMX range Value	Mid point DMX value	Move range (degrees)	Mode	Option	Function
0-14					**No Function**
15-29					**Macro 1**
30-44					**Macro 2**
45-59					**Macro 3**
60-74					**Macro 4**
75-89					**Macro 5**
90-104					**Macro 6**
105-119					**Macro 7**
120-134					**Macro 8**
135-149					**Macro 9**
150-164					**Macro 10**
165-179					**Macro 11**
180-194					**Macro 12**
195-209					**Macro 13**
210-225					**Macro 14**
226-239					**Macro 15**
240-255					**Macro 16**

DMX CHANNEL	8	Parameter: **COLOUR MACROS**

IF: MENU Up-Down MODE ENTER Up-Down MACr ENTER Up-Down EXt ENTER **PLEASE CHECK PAGE 13**

DMX range Value	Mid point DMX value	Move range (degrees)	Mode	Option	Function
0-14					**No Function**
15-22					**Macro 1**
23-30					**Macro 2**
31-38					**Macro 3**
39-46					**Macro 4**
47-54					**Macro 5**
55-62					**Macro 6**
63-70					**Macro 7**
71-78					**Macro 8**
79-86					**Macro 9**
87-94					**Macro 10**
95-102					**Macro 11**
103-110					**Macro 12**
111-118					**Macro 13**
119-126					**Macro 14**
127-134					**Macro 15**
135-142					**Macro 16**

DMX CHANNEL	8	Parameter: **COLOUR MACROS**

IF: ☞ MENU ☞ Up-Down [mode] ☞ ENTER ☞ Up-Down [macr] ☞ ENTER ☞ Up-Down [ext] ☞ ENTER **PLEASE CHECK PAGE 13**

DMX range Value	Mid point DMX value	Move range (degrees)	Mode	Option	Function
143-150					**Rainbow Speed 1 (1 Sec.)**
151-158					**Rainbow Speed 2 (5 Sec.)**
159-166					**Rainbow Speed 3 (10 Sec.)**
167-174					**Rainbow Speed 4 (20 Sec.)**
175-182					**Rainbow Speed 5 (30 Sec.)**
183-190					**Rainbow Speed 6 (60 Sec.)**
191-198					**Rainbow Speed 7 (120 Sec.)**
199-206					**Rainbow Speed 8 (180 Sec.)**
207-214					**Random Speed 1 (0.5 sec.)**
215-222					**Random Speed 2 (1 Sec.)**
223-230					**Random Speed 3 (2 Sec.)**
231-238					**Random Speed 4 (5 Sec.)**
239-246					**Random Speed 5 (10 Sec.)**
247-255					**Random Speed 6 (30 Sec.)**

DMX CHANNEL	9	Parameter: **FUNCTIONS (Recall,Create and Store the Custom white)**

DMX range Value	Mid point DMX value	Move range (degrees)	Mode	Option	Function
0-79		**Custom White Recall (Enable CH 7 for Custom white Recall)**			
80-160		**Custom White Create (Enable CH 7 for Custom white Creation)**			
161-255		**Custom White Store (Store the Custom White created)**			

"WALL" 6 CHANNELS MODE (For use with DTS Wall mounted DMX controller 0514L007)

1 GREEN
2 RED
3 BLUE
4 DIMMER
5 NOT USED
6 SHUTTER

DMX CHANNEL	1	Parameter: **GREEN**

DMX range Value	Mid point DMX value	Move range (degrees)	Mode	Option	Function
0-255					**Proportional colour**

DMX CHANNEL	2	Parameter: **RED**

DMX range Value	Mid point DMX value	Move range (degrees)	Mode	Option	Function
0-255					**Proportional colour**

DMX CHANNEL	3	Parameter: **BLUE**

DMX range Value	Mid point DMX value	Move range (degrees)	Mode	Option	Function
0-255					**Proportional colour**

DMX CHANNEL	4	Parameter: **DIMMER**

DMX range Value	Mid point DMX value	Move range (degrees)	Mode	Option	Function
0-255					**Proportional dimmer**

DMX CHANNEL	5	Parameter: **NOT USED**

DMX range Value	Mid point DMX value	Move range (degrees)	Mode	Option	Function
0-255					**No Function**

DMX CHANNEL	6	Parameter: **SHUTTER**

DMX range Value	Mid point DMX value	Move range (degrees)	Mode	Option	Function
0-9	**5**				**Black-out**
10-19	**14**				**Open**
20-29	**24**				**Black-out**
30-119					**Strobe at variable speed from slow to fast (3700ms-20ms)**
120-149					**Pulse open at variable speed from slow to fast (42,6s-100ms)**
150-179					**Pulse close at variable speed from slow to fast (42,6s-100ms)**
180-204	**192**				**Random Strobe (Master and RGB active)**
205-229	**218**				**Random Strobe (Full)**
230-234					**Red, Yellow, Cyan and Blue colour effects at variable speed**
235-255	**245**				**Open**

DMX PROTOCOL

FOS 100 PLUS SOLO FULL COLOUR

5 CHANNELS MODE (Shutter + Dimmer + RGB)

1 SHUTTER
2 DIMMER
3 RED
4 GREEN
5 BLUE

DMX CHANNEL	1	Parameter: **SHUTTER**

DMX range Value	Mid point DMX value	Move range (degrees)	Mode	Option	Function
0-9	**5**				**Black-out**
10-19	**14**				**Open**
20-29	**24**				**Black-out**
30-119					**Strobe at variable speed from slow to fast (3700ms-20ms)**
120-149					**Pulse open at variable speed from slow to fast (42,6s-100ms)**
150-179					**Pulse close at variable speed from slow to fast (42,6s-100ms)**
180-204	**192**				**Random Strobe (Master and RGB active)**
205-229	**218**				**Random Strobe (Full)**
230-234					**Red, Yellow, Cyan and Blue colour effects at variable speed**
235-255	**245**				**Open**

DMX CHANNEL	2	Parameter: **DIMMER**

DMX range Value	Mid point DMX value	Move range (degrees)	Mode	Option	Function
0-255					**Proportional dimmer**

DMX CHANNEL	3	Parameter: **RED**

DMX range Value	Mid point DMX value	Move range (degrees)	Mode	Option	Function
0-255					**Proportional colour**

DMX CHANNEL	**4**	Parameter: **GREEN**

DMX range Value	Mid point DMX value	Move range (degrees)	Mode	Option	Function
0-255					**Proportional colour**

DMX CHANNEL	**5**	Parameter: **BLUE**

DMX range Value	Mid point DMX value	Move range (degrees)	Mode	Option	Function
0-255					**Proportional colour**

DMX PROTOCOL

FOS 100 PLUS SOLO FULL COLOUR

M3CH mode (4 DMX channels; Dimmer + RGB)

1 DIMMER
2 RED
3 GREEN
4 BLUE

DMX CHANNEL	**1**	Parameter: **DIMMER**

DMX range Value	Mid point DMX value	Move range (degrees)	Mode	Option	Function
0-255					**Proportional dimmer**

DMX CHANNEL	**2**	Parameter: **RED**

DMX range Value	Mid point DMX value	Move range (degrees)	Mode	Option	Function
0-255					**Proportional colour**

DMX CHANNEL	**3**	Parameter: **GREEN**

DMX range Value	Mid point DMX value	Move range (degrees)	Mode	Option	Function
0-255					**Proportional colour**

DMX CHANNEL	**4**	Parameter: **BLUE**

DMX range Value	Mid point DMX value	Move range (degrees)	Mode	Option	Function
0-255					**Proportional colour**

DMX PROTOCOL

FOS 100 PLUS SOLO FULL COLOUR

RGB mode (3 DMX channels)

1 RED
2 GREEN
3 BLUE

DMX CHANNEL	**1**	Parameter: **RED**

DMX range Value	Mid point DMX value	Move range (degrees)	Mode	Option	Function
0-255					**Proportional colour**

DMX CHANNEL	**2**	Parameter: **GREEN**

DMX range Value	Mid point DMX value	Move range (degrees)	Mode	Option	Function
0-255					**Proportional colour**

DMX CHANNEL	**3**	Parameter: **BLUE**

DMX range Value	Mid point DMX value	Move range (degrees)	Mode	Option	Function
0-255					**Proportional colour**

DMX PROTOCOL

FOS 100 SOLO RGBA / WHITE

10 CHANNELS MODE (Default)

1 **SHUTTER**
2 **DIMMER**
3 **RED**
4 **GREEN**
5 **BLUE**
6 **AMBER**
7 **WHITE (Pre-programmed whites at different colour temperatures)**
8 **CTC**
9 **COLOURS MACRO**
10 **FUNCTIONS**

DMX CHANNEL	1	Parameter: **SHUTTER**

DMX range Value	Mid point DMX value	Move range (degrees)	Mode	Option	Function
0-9	**5**				**Black-out**
10-19	**14**				**Open**
20-29	**24**				**Black-out**
30-119					**Strobe at variable speed from slow to fast (3700ms-20ms)**
120-149					**Pulse open at variable speed from slow to fast (42,6s-100ms)**
150-179					**Pulse close at variable speed from slow to fast (42,6s-100ms)**
180-204	**192**				**Random Strobe (Master and RGB active)**
205-229	**218**				**Random Strobe (Full)**
230-234					**Red, Yellow, Cyan and Blue colour effects at variable speed**
235-255	**245**				**Open**

DMX CHANNEL	2	Parameter: **DIMMER**

DMX range Value	Mid point DMX value	Move range (degrees)	Mode	Option	Function
0-255					**Proportional dimmer**

DMX CHANNEL	3	Parameter: **RED**

DMX range Value	Mid point DMX value	Move range (degrees)	Mode	Option	Function
0-255					**Proportional colour**

DMX CHANNEL	4	Parameter: **GREEN**

DMX range Value	Mid point DMX value	Move range (degrees)	Mode	Option	Function
0-255					**Proportional colour**

DMX CHANNEL	5	Parameter: **BLUE**

DMX range Value	Mid point DMX value	Move range (degrees)	Mode	Option	Function
0-255					**Proportional colour**

DMX CHANNEL	6	Parameter: **AMBER**

DMX range Value	Mid point DMX value	Move range (degrees)	Mode	Option	Function
0-255					**Proportional colour**

DMX CHANNEL	7	Parameter: **WHITE (Pre-programmed White at diff. color temperature)**

DMX range Value	Mid point DMX value	Move range (degrees)	Mode	Option	Function
0-55	**23**				**No Function**
56-105	**80**				**Full (Red-Green-Blue at Full)**
106-155	**130**				**White DTS**

IF CHANNEL 10 (FUNCTIONS) = CUSTOM WHITE RECALL (Dmx range value 0 - 79)

156-205	**180**	**Custom White Recall**
206-255	**225**	**White CTC (Channel 8 CTC enabled 256 color temp. Correction Macros: 2800°K-6500°K)**

IF CHANNEL 10 (FUNCTIONS) = CUSTOM WHITE CREATE (Dmx range value 80 - 160)

156-205	**180**	**Custom White Create (RGB levels selectable by DMX)**
206-255	**225**	**White CTC (Channel 8 CTC enabled 256 color temp. Correction Macros: 2800°K-6500°K)**

DMX CHANNEL	8	Parameter: **CTC (Color temperature correction)**

DMX range Value	Mid point DMX value	Move range (degrees)	Mode	Option	Function

IF CHANNEL 7 (White) = WHITE CTC (Dmx range value 206 - 255)

0-255	**256 color temp. Correction Macros: 0 = 2800°K / 128 = 4500°K / 255 = 6500°K**

IF CHANNEL 7 (White) = NO FUNCTION (Dmx range value 0 - 43)

0-255	**No Function**

DMX CHANNEL	9	Parameter: **COLOUR MACROS**

IF: MENU Up-Down nOdE ENTER Up-Down nACr ENTER Up-Down Std ENTER **PLEASE CHECK PAGE 18**

DMX range Value	Mid point DMX value	Move range (degrees)	Mode	Option	Function
0-14					**No Function**
15-29					**Macro 1**
30-44					**Macro 2**
45-59					**Macro 3**
60-74					**Macro 4**
75-89					**Macro 5**
90-104					**Macro 6**
105-119					**Macro 7**
120-134					**Macro 8**
135-149					**Macro 9**
150-164					**Macro 10**
165-179					**Macro 11**
180-194					**Macro 12**
195-209					**Macro 13**
210-225					**Macro 14**
226-239					**Macro 15**
240-255					**Macro 16**

DMX CHANNEL	9	Parameter: **COLOUR MACROS**

IF:

PLEASE CHECK PAGE 18

DMX range Value	Mid point DMX value	Move range (degrees)	Mode	Option	Function
0-14					**No Function**
15-22					**Macro 1**
23-30					**Macro 2**
31-38					**Macro 3**
39-46					**Macro 4**
47-54					**Macro 5**
55-62					**Macro 6**
63-70					**Macro 7**
71-78					**Macro 8**
79-86					**Macro 9**
87-94					**Macro 10**
95-102					**Macro 11**
103-110					**Macro 12**
111-118					**Macro 13**
119-126					**Macro 14**
127-134					**Macro 15**
135-142					**Macro 16**
143-150					**Rainbow Speed 1 (1 Sec.)**
151-158					**Rainbow Speed 2 (5 Sec.)**
159-166					**Rainbow Speed 3 (10 Sec.)**
167-174					**Rainbow Speed 4 (20 Sec.)**
175-182					**Rainbow Speed 5 (30 Sec.)**
183-190					**Rainbow Speed 6 (60 Sec.)**
191-198					**Rainbow Speed 7 (120 Sec.)**
199-206					**Rainbow Speed 8 (180 Sec.)**
207-214					**Random Speed 1 (0.5 sec.)**
215-222					**Random Speed 2 (1 Sec.)**
223-230					**Random Speed 3 (2 Sec.)**
231-238					**Random Speed 4 (5 Sec.)**
239-246					**Random Speed 5 (10 Sec.)**
247-255					**Random Speed 6 (30 Sec.)**

DMX CHANNEL	10	Parameter: **FUNCTIONS (Recall,Create and Store the Custom white)**

DMX range Value	Mid point DMX value	Move range (degrees)	Mode	Option	Function
0-79		**Custom White Recall (Enable CH 6 for Custom white Recall)**			
80-160		**Custom White Create (Enable CH 6 for Custom white Creation)**			
161-255		**Custom White Store (Store the Custom White created)**			

DMX PROTOCOL

FOS 100 SOLO RGBA / WHITE

6 CHANNELS MODE (Shutter + Dimmer + RGBA)

1 SHUTTER
2 DIMMER
3 RED
4 GREEN
5 BLUE
6 AMBER

DMX CHANNEL	**1**	Parameter: **SHUTTER**

DMX range Value	Mid point DMX value	Move range (degrees)	Mode	Option	Function
0-9	**5**				**Black-out**
10-19	**14**				**Open**
20-29	**24**				**Black-out**
30-119					**Strobe at variable speed from slow to fast (3700ms-20ms)**
120-149					**Pulse open at variable speed from slow to fast (42,6s-100ms)**
150-179					**Pulse close at variable speed from slow to fast (42,6s-100ms)**
180-204	**192**				**Random Strobe (Master and RGB active)**
205-229	**218**				**Random Strobe (Full)**
230-234					**Red, Yellow, Cyan and Blue colour effects at variable speed**
235-255	**245**				**Open**

DMX CHANNEL	**2**	Parameter: **DIMMER**

DMX range Value	Mid point DMX value	Move range (degrees)	Mode	Option	Function
0-255					**Proportional dimmer**

DMX CHANNEL	**3**	Parameter: **RED**

DMX range Value	Mid point DMX value	Move range (degrees)	Mode	Option	Function
0-255					**Proportional colour**

DMX CHANNEL	**4**	Parameter: **GREEN**

DMX range Value	Mid point DMX value	Move range (degrees)	Mode	Option	Function
0-255					**Proportional colour**

DMX CHANNEL	**5**	Parameter: **BLUE**

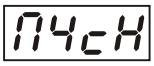
DMX range Value	Mid point DMX value	Move range (degrees)	Mode	Option	Function
0-255					**Proportional colour**

DMX CHANNEL	**6**	Parameter: **AMBER**

DMX range Value	Mid point DMX value	Move range (degrees)	Mode	Option	Function
0-255					**Proportional colour**

DMX PROTOCOL

FOS 100 SOLO RGBA / WHITE

M4CH mode  (5 DMX channels; Dimmer + RGBA)

1 DIMMER
2 RED
3 GREEN
4 BLUE
5 AMBER

DMX CHANNEL	**1**	Parameter: **DIMMER**

DMX range Value	Mid point DMX value	Move range (degrees)	Mode	Option	Function
0-255					**Proportional dimmer**

DMX CHANNEL	**2**	Parameter: **RED**

DMX range Value	Mid point DMX value	Move range (degrees)	Mode	Option	Function
0-255					**Proportional colour**

DMX CHANNEL	**3**	Parameter: **GREEN**

DMX range Value	Mid point DMX value	Move range (degrees)	Mode	Option	Function
0-255					**Proportional colour**

DMX CHANNEL	**4**	Parameter: **BLUE**

DMX range Value	Mid point DMX value	Move range (degrees)	Mode	Option	Function
0-255					**Proportional colour**

DMX CHANNEL	**5**	Parameter: **AMBER**

DMX range Value	Mid point DMX value	Move range (degrees)	Mode	Option	Function
0-255					**Proportional colour**

DMX PROTOCOL

FOS 100 SOLO RGBA / WHITE

RGBA mode (4 DMX channels)

1 RED
2 GREEN
3 BLUE
4 AMBER

DMX CHANNEL	**1**	Parameter: **RED**

DMX range Value	Mid point DMX value	Move range (degrees)	Mode	Option	Function
0-255					**Proportional colour**

DMX CHANNEL	**2**	Parameter: **GREEN**

DMX range Value	Mid point DMX value	Move range (degrees)	Mode	Option	Function
0-255					**Proportional colour**

DMX CHANNEL	**3**	Parameter: **BLUE**

DMX range Value	Mid point DMX value	Move range (degrees)	Mode	Option	Function
0-255					**Proportional colour**

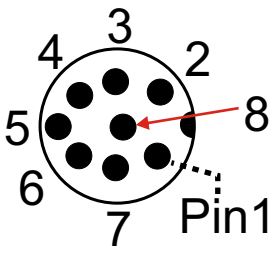
DMX CHANNEL	**4**	Parameter: **AMBER**

DMX range Value	Mid point DMX value	Move range (degrees)	Mode	Option	Function
0-255					**Proportional colour**

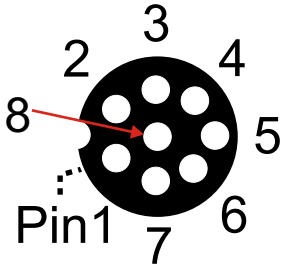
WIRING DIAGRAM

FOS 100+ FULL COLOUR / FOS 100 RGBA / FOS 100 WHITE are provided with an M12 male connector (30cm cable lenght).

M12 LED input
Male cable connector
on board:
FOS 100 all models



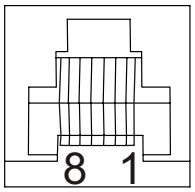
M12 LED output
Female panel connector
on board :
Z8 / Z10 / Z1 outdoor
led controller



LEDS
CONNECTOR PINOUT

1-RED + (FC / RGBA / WHITE)
2-RED - (FC / RGBA / WHITE)
3-GREEN + (FC / RGBA / WHITE)
4-GREEN - (FC / RGBA / WHITE)
5-BLUE + (FC / RGBA / WHITE)
6-BLUE - (FC / RGBA / WHITE)
7-AMBER - (RGBA / WHITE)
8-AMBER + (RGBA / WHITE)

Rj45 LED output
Female panel connector
on board :
Z8 / Z1 led controller



8-pin Female (RJ45)

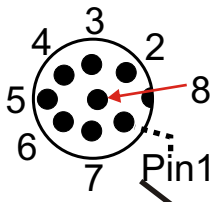
LEDS
CONNECTOR PINOUT

Pin 1 = RED +
Pin 2 = RED -
Pin 3 = GREEN +
Pin 4 = GREEN -
Pin 5 = BLUE +
Pin 6 = BLUE -
Pin 7 = AMBER +
Pin 8 = AMBER -

WIRING CONNECTIONS

FOS 100+ FULL COLOUR

M12 LED input
Male cable connector
on board:
FOS 100 all models

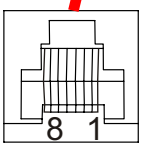


Pin 1 = RED +
Pin 2 = RED -
Pin 3 = GREEN +
Pin 4 = GREEN -
Pin 5 = BLUE +
Pin 6 = BLUE -
Pin 7 = NOT USED
Pin 8 = NOT USED

RJ45 MALE TO M12 FEMALE
CABLE CONVERTER
D.T.S. CODE: 03.LA.061

LEDS
CONNECTOR PINOUT

Pin 1 = RED +
Pin 2 = RED -
Pin 3 = GREEN +
Pin 4 = GREEN -
Pin 5 = BLUE +
Pin 6 = BLUE -
Pin 7 = AMBER +
Pin 8 = AMBER -



8-pin Female (RJ45)

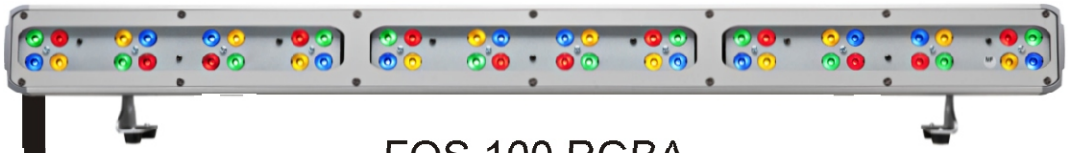
Z1 PLUS
DMX-512 LED driver
Code 03.LA.009.P

IMPORTANT:

The maximum number of FOS 100 (all models) connectable to the Z1PLUS Power supply is 1 pcs.

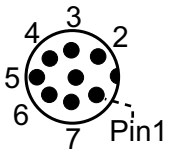
NEVER CONNECT NOR DISCONNECT A FOS 100 / FOS 100+ UNIT WHEN THE POWER SUPPLY IS TURNED ON.

WIRING CONNECTIONS



FOS 100 RGBA

FOS 100+ FULL COLOUR



PIN CONNECTOR MALE ON BOARD FOS 100

Z8 (8 POLES PLUG-IN OUTPUT)
03.LA.080.V2

LEDs OUT 8
LEDs OUT 7
LEDs OUT 6
LEDs OUT 5

FOS 100 WHITE + AMBER

FOS 100+ FULL COLOUR

LEDS CONNECTOR PINOUT (M12)

Pin 1 = RED +
Pin 2 = RED -
Pin 3 = GREEN +
Pin 4 = GREEN -
Pin 5 = BLUE +
Pin 6 = BLUE -
Pin 7 = AMBER -
Pin 8 = AMBER +

IMPORTANT:

The maximum number of FOS 100 LED bar connectable to each Z8 LEDs output is 1 pc.
NEVER CONNECT NOR DISCONNECT A FOS UNIT WHEN THE POWER SUPPLY IS TURNED ON.
The Maximum distance between the Z8 and the FOS 100 FULL COLOUR unit should not exceed 50 meters.
The Maximum distance between the Z8 and the FOS 100 RGBA / WHITE unit should not exceed 100 meters.

FOS 100+ FULL COLOUR / FOS 100+ SOLO FULL COLOUR codes

03.LB001.26.FP10	FOS 100+ IP65 FULLCOL.SPOT SILVER
03.LB001.26.FP25	FOS 100+ IP65 FULLCOL.MEDIUM SILVER
03.LB001.26.FP40	FOS 100+ IP65 FULLCOL.WIDE SILVER
03.LB001.FP10	FOS 100+ IP65 FULLCOL.SPOT V.BLACK
03.LB001.FP25	FOS 100+ IP65 FULLCOL.MEDIUM BLACK
03.LB001.FP40	FOS 100+ IP65 FULLCOL.WIDE BLACK
03.LB001S.26.FP10	FOS 100+ SOLO IP65 FULLCOL.SPOT SILVER
03.LB001S.26.FP25	FOS 100+ SOLO IP65 FULLCOL.MEDIUM SILVER
03.LB001S.26.FP40	FOS 100+ SOLO IP65 FULLCOL.WIDE SILVER
03.LB001S.FP10	FOS 100+ SOLO IP65 FULLCOL.SPOT BLACK
03.LB001S.FP25	FOS 100+ SOLO IP65 FULLCOL.MEDIUM BLACK
03.LB001S.FP40	FOS 100+ SOLO IP65 FULLCOL.WIDE BLACK
03.LB004S.26.FP10	FOS 100+ SOLO IP20 FULLCOL.SPOT SILVER
03.LB004S.26.FP25	FOS 100+ SOLO IP20 FULLCOL.MEDIUM SILVER
03.LB004S.26.FP40	FOS 100+ SOLO IP20 FULLCOL.WIDE SILVER
03.LB004S.FP10	FOS 100+ SOLO IP20 FULLCOL.SPOT BLACK
03.LB004S.FP25	FOS 100+ SOLO IP20 FULLCOL.MEDIUM BLACK
03.LB004S.FP40	FOS 100+ SOLO IP20 FULLCOL.WIDE BLACK
03.LB005S.26.FP	FOS 100+ TRIPLE SOLO FULLC.IP20 SILVER
03.LB005S.FP	FOS 100+ TRIPLE SOLO FULLC.IP20 BLACK
03.LB007S.26.FP	FOS 100+ TRIPLE SOLO FULLC.IP65 SILVER
03.LB007S.FP	FOS 100+ TRIPLE SOLO FULLC.IP65 BLACK

FOS 100 RGBA / FOS 100 SOLO RGBA codes

03.LB001.26.T10	FOS 100 IP65 RGBA SPOT SILVER
03.LB001.26.T25	FOS 100 IP65 RGBA MEDIUM SILVER
03.LB001.26.T40	FOS 100 IP65 RGBA WIDE SILVER
03.LB001.T10	FOS 100 IP65 RGBA SPOT BLACK
03.LB001.T25	FOS 100 IP65 RGBA MEDIUM BLACK
03.LB001.T40	FOS 100 IP65 RGBA WIDE BLACK
03.LB001S.26.T10	FOS 100 SOLO IP65 RGBA SPOT SILVER
03.LB001S.26.T25	FOS 100 SOLO IP65 RGBA MEDIUM SILVER
03.LB001S.26.T40	FOS 100 SOLO IP65 RGBA WIDE SILVER
03.LB001S.T10	FOS 100 SOLO IP65 RGBA SPOT BLACK
03.LB001S.T25	FOS 100 SOLO IP65 RGBA MEDIUM BLACK
03.LB001S.T40	FOS 100 SOLO IP65 RGBA WIDE BLACK
03.LB004S.26.T10	FOS 100 SOLO IP20 RGBA SPOT SILVER
03.LB004S.26.T25	FOS 100 SOLO IP20 RGBA MEDIUM SILVER
03.LB004S.26.T40	FOS 100 SOLO IP20 RGBA WIDE SILVER
03.LB004S.T10	FOS 100 SOLO IP20 RGBA SPOT BLACK
03.LB004S.T25	FOS 100 SOLO IP20 RGBA MEDIUM BLACK
03.LB004S.T40	FOS 100 SOLO IP20 RGBA WIDE BLACK
03.LB005S.26.T	FOS 100 TRIPLE SOLO RGBA IP20 SILVER
03.LB005S.T	FOS 100 TRIPLE SOLO RGBA IP20 BLACK
03.LB007S.26.T	FOS 100 TRIPLE SOLO RGBA IP65 SILVER
03.LB007S.T	FOS 100 TRIPLE SOLO RGBA IP65 BLACK

FOS 100 WHITE / FOS 100 SOLO WHITE codes

03.LB001.26.W10	FOS 100 IP65 WHI+AMB SPOT SILVER
03.LB001.26.W25	FOS 100 IP65 WHI+AMB MEDIUM SILVER
03.LB001.26.W40	FOS 100 IP65 WHI+AMB WIDE SILVER
03.LB001.W10	FOS 100 IP65 WHI+AMB SPOT BLACK
03.LB001.W25	FOS 100 IP65 WHI+AMB MEDIUM BLACK
03.LB001.W40	FOS 100 IP65 WHI+AMB WIDE BLACK
03.LB001S.26.W10	FOS 100 SOLO IP65 WHI+AMB SPOT SILVER
03.LB001S.26.W25	FOS 100 SOLO IP65 WHI+AMB MEDIUM SILVER
03.LB001S.26.W40	FOS 100 SOLO IP65 WHI+AMB WIDE SILVER
03.LB001S.W10	FOS 100 SOLO IP65 WHI+AMB SPOT BLACK
03.LB001S.W25	FOS 100 SOLO IP65 WHI+AMB MEDIUM BLACK
03.LB001S.W40	FOS 100 SOLO IP65 WHI+AMB WIDE BLACK
03.LB004S.26.W10	FOS 100 SOLO IP20 WHI+AMB SPOT SILVER
03.LB004S.26.W25	FOS 100 SOLO IP20 WHI+AMB MEDIUM SILVER
03.LB004S.26.W40	FOS 100 SOLO IP20 WHI+AMB WIDE SILVER
03.LB004S.W10	FOS 100 SOLO IP20 WHI+AMB SPOT BLACK
03.LB004S.W25	FOS 100 SOLO IP20 WHI+AMB MEDIUM BLACK
03.LB004S.W40	FOS 100 SOLO IP20 WHI+AMB WIDE BLACK
03.LB005S.26.W	FOS 100 TRIPLE SOLO WHI+AMB IP20 SILVER
03.LB005S.W	FOS 100 TRIPLE SOLO WHI+AMB IP20 BLACK
03.LB007S.26.W	FOS 100 TRIPLE SOLO WHI+AMB IP65 SILVER
03.LB007S.W	FOS 100 TRIPLE SOLO WHI+AMB IP65 BLACK

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DTS

The Lighting Company

ISO 9001:2000
D.T.S. quality system
is certified to the
ISO 9001:2000 standard

PROUDLY MADE IN ITALY

D.T.S. products are designed
and manufactured at the D.T.S.
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D.T.S. Illuminazione s.r.l - Via Fagnano Selve 10-12-14 47843 - Misano Adriatico (RN) Italy
Tel. +39 0541 611131 Fax +39 0541 611111 info@dts-lighting.it www.dts-lighting.it